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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/666,156	09/19/2000	Haruko Inoue	0819-425	9764

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EXAMINER

LOKE, STEVEN HO YIN

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	09/666,156	Applicant(s)	INOUE ET AL.
Examiner	Steven Loke	Art Unit	2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

### A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

1) Responsive to communication(s) filed on 29 March 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

4) Claim(s) 1-11 is/are pending in the application.

4a) Of the above claim(s) 8-11 is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-7 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)  
3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) Other:

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1. Claims 8-11 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

2. Applicant's election without traverse of claims 1-7 in Paper No. 5 is acknowledged.

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

4. Figures 11, 12, 13(a) through 13(d), 14(a), 14(b) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification never explains what is a forward biased breakdown voltage of silicon as claimed in claim 7.

6. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, lines 1-2, "size" is unclear whether it is being referred to a width or a thickness or something else.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1-6 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Arai.

In regards to claim 1, Arai shows all the elements of the claimed invention in fig. 5. It comprises: a high-voltage MOS transistor wherein a resistance value of a source region [115] is set independently of a resistance value of a drain region [116] in such a manner as to increase a sustaining breakdown voltage of the transistor (col. 10, lines 10-65).

In regards to claim 2, Arai shows a resistance value of a source offset region [115] is set independently of a resistance value of a drain offset region [116] in such a manner as to increase the sustaining breakdown voltage of the transistor.

In regards to claim 3, Arai shows all the elements of the claimed invention in fig. 5. It comprises: a drain offset region [116]; and a source offset region [115], which is asymmetrical to the drain offset region, whereby the transistor has a high sustaining breakdown voltage.

In regards to claim 4, Arai shows a size of the source offset region [115] is not equal to a size of the drain offset region [116] such that the transistor has the high sustaining breakdown voltage.

In regards to claim 5, Arai shows a dopant concentration of the source offset region [115] is not equal to a dopant concentration of the drain offset region [116] such that the transistor has the high sustaining breakdown voltage.

In regards to claim 6, Arai shows all the elements of the claimed invention in fig. 5. It comprises: a drain offset region [116]; and a source offset region [115], which has a dopant concentration different from that of the drain offset region, whereby the transistor has a high sustaining breakdown voltage.

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior art (fig. 13(d)) in view of Yoshihisa.

Prior art (fig. 13(d)) shows all the elements of the claimed invention except the resistance value of the source region is set higher than that of the drain region.

Yoshihisa shows the length of the source offset region [22] is larger than that of the drain offset region [12] in fig. 1. Therefore, it is inherent that the resistance value of the source offset region is set higher than that of the drain offset region such that a substrate voltage minus a forward biased breakdown voltage of silicon does not exceed a source voltage easily.

Since both Prior art (fig. 13(d)) and Yoshihisa teach a high breakdown voltage MOSFET device, it would have been obvious to have the source and drain offset regions of Yoshihisa in Prior art (fig. 13(d)) because they improve the breakdown strength between the gate electrode and the source or drain region.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Loke whose telephone number is (703) 308-4920. The examiner can normally be reached on 7:50 am to 5:20 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

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May 5, 2002

Steven L. Rose  
Chesapeake Utilities

*Steven Rose*